

HTIS



azardous Technical Information Services

BULLETIN

VOL. 16 NO. 2

MAR - APR 2006

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2005 CERCLA Priority List of Hazardous Substances

By Muhammad Hanif,
Chemist, HTIS

The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) section 104 (i), as amended by the Superfund Amendments and Reauthorization Act (SARA), requires the Agency for Toxic Substances and Disease Registry (ATSDR), and the Environmental Protection Agency (EPA) to prepare a list, in order of priority, of substances that are most commonly found at facilities on the National Priorities List (NPL) and which are determined to pose the most significant potential threat to human health due to their known or suspected toxicity and potential for human exposure at these NPL sites. **CERCLA also requires this list to be revised periodically to reflect**

additional information on hazardous substances.

The CERCLA priority list is revised and published on a 2-year basis, with a yearly informal review and revision. Each substance on the CERCLA Priority List of Hazardous Substances is a candidate to become the subject of a toxicological profile prepared by ATSDR and subsequently a candidate for the identification of priority data needs. The priority list is based on an algorithm that utilizes the following three components: **frequency of occurrence at NPL sites, toxicity, and potential for human exposure to the substances found at NPL sites.** The algorithm utilizes data from ATSDR's HazDat database, which contains information from ATSDR's public health assessments and health consultations.

It should be noted that this priority list is not a list of "most toxic" substances, but rather a prioritization of substances based on a combination of their

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frequency, toxicity, and potential for human exposure at NPL sites.

The objective of the priority list is to rank substances across all NPL hazardous waste sites to provide guidance in selecting which substances will be the subject of toxicological profiles prepared by ATSDR. Thus, it is possible for substances with low toxicity but high NPL frequency of occurrence and exposure to be on this priority list.

There is a "Support Document" to the CERCLA Priority List of Hazardous Substances that describes in detail how the list is developed. This support document also contains an appendix showing the breakdown of the total scores for each substance on the priority list. The "Support Document" can be viewed and downloaded from <http://www.atsdr.cdc.gov/cli-st-supportdoc.html>.

The Top 20 hazardous substances on the CERCLA Priority List of Hazardous Substances for 2005 are listed and ranked below in the order of occurrence:

1. Arsenic
2. Lead
3. Mercury
4. Vinyl Chloride

5. Polychlorinated Biphenyls
6. Benzene
7. Polycyclic Aromatic Hydrocarbons
8. Cadmium
9. Benzo(A)Pyrene
10. Benzo(B)Fluoranthene
11. Chloroform
12. Ddt, P,P'-
13. Aroclor 1254
14. Aroclor 1260
15. Dibenzo(A,H) Anthracene
16. Trichloroethylene
17. Dieldrin
18. Chromium, Hexavalent
19. Phosphorus, White
20. Dde, P,P'-

In addition to the List of Hazardous Substances, the ATSDR Division of Toxicology provides several sets of publications with answers to many health issues, as well as, chemical information addressing concerns that are voiced by community groups. The ATSDR publications may be accessed online via the following links: <http://www.atsdr.cdc.gov/toxfaq.html>, <http://www.atsdr.cdc.gov/phshome.html>, and <http://www.atsdr.cdc.gov/toxpro2.html>

References: 1. Federal Register (FR): December 7, 2005, Volume 70, Number 234 Pages 72840-72842 (70FR72840). 2. <http://www.atsdr.cdc.gov>

DOT Revises "Hazmat Employee" and Other Definitions

By Tom McCarley and Abdul Khalid, HTIS

In a final rule published in the December 9, 2006 Federal Register, the Pipeline and Hazardous Materials Safety Administration of the Department of Transportation (DOT) revised some important terminology for those involved in the shipping of hazardous materials.

The definition of who is a "hazmat employee" and "hazmat employer" at 49 CFR 171.8 has been revised and now reads as follows:

Hazmat employee means:

- (1) A person who is:
 - (i) Employed on a full-time, part time, or temporary basis by a hazmat employer and who in the course of such full time, part time or temporary employment directly affects hazardous materials transportation safety;
 - (ii) Self-employed (including an owner-operator of a motor vehicle, vessel, or

aircraft) transporting hazardous materials in commerce who in the course of such self-employment directly affects hazardous materials transportation safety;

(iii) A railroad signalman; or

(iv) A railroad maintenance-of-way employee.

(2) This term includes an individual, employed on a full time, part time, or temporary basis by a hazmat employer, or who is self-employed, who during the course of employment:

(i) Loads, unloads, or handles hazardous materials;

(ii) Designs, manufactures, fabricates, inspects, marks, maintains, reconditions, repairs, or tests a package, container or packaging component that is represented, marked, certified, or sold as qualified for use in transporting hazardous material in commerce.

(iii) Prepares hazardous materials for transportation;

(iv) Is responsible for safety of transporting hazardous materials;

(v) Operates a vehicle used to transport hazardous materials.

Hazmat employer means:

(1) A person who employs or uses at least one hazmat employee on a full-time, part time, or temporary basis; and who:

(i) Transports hazardous materials in commerce;

(ii) Causes hazardous materials to be transported in commerce; or

(iii) Designs, manufactures, fabricates, inspects, marks, maintains, reconditions, repairs or tests a package, container, or packaging component that is represented, marked, certified, or sold by that person as qualified for use in transporting hazardous materials in commerce;

(2) A person who is self-employed (including an owner-operator of a motor vehicle, vessel, or aircraft) transporting materials in commerce; and who:

(i) Transports hazardous materials in commerce;

(ii) Causes hazardous materials to be transported in commerce; or

(iii) Designs, manufactures, fabricates, inspects, marks, maintains, reconditions, repairs or tests a package, container, or packaging component that is represented, marked, certified, or sold by that person as qualified for use in transporting hazardous materials in commerce; or

(3) A department, agency, or instrumentality of the United States Government, or an authority of a State, political subdivision of a State, or an Indian tribe; and who:

(i) Transports hazardous materials in commerce;

(ii) Causes hazardous materials to be transported in commerce; or

(iii) Designs, manufactures, fabricates, inspects, marks, maintains, reconditions, repairs or tests a package, container, or packaging component that is represented, marked, certified, or sold by that person as qualified for use in transporting hazardous materials in commerce.”

The definition change makes it clear that self-employed persons are also covered under the hazmat regulations as are those that “represent, mark, certify, or sell packaging components as qualified for use in transporting hazardous materials”.

The December 9, 2005 regulation also changes the term “Exemption” to the term “Special Permit” and revises the requirement for preparation and retention of shipping papers at 49 CFR 172.201(e) as follows:

“(e) Retention and Recordkeeping. Each person who provides a shipping paper must retain a copy of the shipping paper required by Sec. 172.200(a), or an electronic image thereof, that is accessible at or through its principal place of business and must make the shipping paper available, upon request, to an authorized official of a Federal, State, or local government agency at reasonable times and locations. **For a hazardous waste, the shipping paper**

copy must be retained for three years after the material is accepted by the initial carrier. For all other hazardous materials, the shipping paper must be retained for two years after the material is accepted by the initial carrier. Each shipping paper copy must include the date of acceptance by the initial carrier, except that, for rail, vessel, or air shipments, the date on the shipment waybill, airbill, or bill of lading may be used in place of the date of acceptance by the initial carrier. A motor carrier (as defined in Sec. 390.5 of subchapter B of chapter III of subtitle B) using a shipping paper without change for multiple shipments of one or more hazardous materials having the same shipping name and identification number may retain a single copy of the shipping paper, instead of a copy for each shipment made, if the carrier also retains a record of each shipment made, to include shipping name, identification number, quantity transported, and date of shipment."

Other changes involve a security plan exemption for farmers and the clarification of the applicability of postal laws and regulations for hazmat shipments (generally the postal laws will apply except in cases of "imminent hazard"). There are other

nomenclature and definition changes in the rule as well.

Reference: Federal Register, Vol. 70, No. 236, pp 73156-73166, December, 9, 2005.

EPA Promulgates Important Drinking Water Rules

By Tom McCarley, Chemist, HTIS

On January 4, 2006, the Environmental Protection Agency published a major rule governing the levels of disinfection byproducts that can be present in the water you drink from most community-supplied water systems. Of course, disinfection of the water supply to kill disease-causing pathogens is a necessary step to ensure that you are supplied with safe drinking water. But many of the time honored methods of disinfection (such as chlorine and chlorine derivatives) can result in the production of harmful breakdown chemicals via reactions with naturally occurring organic and inorganic matter in source water and distribution systems. Some of the byproducts are known or suspect human carcinogens and with this in mind, the EPA issued what they are calling their Stage 2 Disinfectants and Disinfection Byproducts Rule.

The Stage 2 Disinfectants and Disinfection Byproducts Rule (DBPR) became effective March 6, 2006 and is intended to provide for increased protection against the potential risks for cancer, reproductive, and developmental health effects associated with disinfection byproducts (DBPs). The new regulation:

- Contains maximum contaminant level goals for chloroform, monochloroacetic acid and trichloroacetic acid;
- National Primary Drinking Water Regulations, which consist of maximum contaminant levels (MCLs) and monitoring, reporting, and public notification requirements for total trihalomethanes and haloacetic acids; and
- Revisions to the reduced monitoring requirements for bromate.

The January 4, 2006 final rule also specifies the best available technologies for the final MCLs. The EPA is also approving additional analytical methods for the determination of

disinfectants and DBPs in drinking water.

The 107 page Stage 2 Disinfection BPR applies to public water systems that are community water systems or nontransient noncommunity water systems that add a primary or residual disinfectant other than ultraviolet light or deliver water that has been treated with a primary or residual disinfectant other than ultraviolet light.

One day after the rulemaking discussed above, the EPA promulgated a separate 134 page final rule which looks at treatment of surface waters used as drinking water sources. That rule is known as the Long Term 2 Enhanced Surface Water Treatment Rule which calls for the use of treatment techniques, along with monitoring, reporting, and public notification requirements, for all public water systems that use surface water sources. The purposes of the Long Term 2 Enhanced Surface Water Treatment Rule are to protect public health from illness due to *Cryptosporidium* and other microbial pathogens in drinking water and to address risk-risk trade-offs with the control of disinfection byproducts. Key provisions in the Long Term 2 Enhanced Surface

Water Treatment Rule include the following:

- Source water monitoring for *Cryptosporidium*, with a screening procedure to reduce monitoring costs for small systems;
- Risk-targeted *Cryptosporidium* treatment by filtered systems with the highest source water *Cryptosporidium* levels;
- Inactivation of *Cryptosporidium* by all unfiltered systems; criteria for the use of *Cryptosporidium* treatment and control processes; and
- Covering or treating uncovered finished water storage facilities.

Where groundwater is directly under the influence of surface water, it is also covered by the Long Term 2 Enhanced rule.

References: 1. Federal Register, Vol. 71, No. 2, pp 388-493, January 4, 2006. 2. Federal Register, Vol. 71, No. 3, pp654-786, January 5, 2006.

EPA Announces Receipt of Dermal Absorption Rate Data for 13 Chemicals

By Ariel Rosa,
Environmental Protection
Specialist, HTIS

On April 26, 2004, the Environmental Protection Agency (EPA) promulgated a final rule under the Toxic Substances Control Act (TSCA) that required manufacturers (including importers) and processors of 34 chemicals to conduct *in vitro* dermal absorption rate testing. The EPA's ruling was made at the request of the Occupational Safety and Health Administration (OSHA) and is found in the *Federal Register* (69 Fed. Reg 22402). The 34 chemicals are used in a wide variety of applications as industrial solvents, which may result in harmful exposures to a substantial number of workers.

According to OSHA the data obtained under this testing program will be used to evaluate the need for "skin designations". Skin designations are used by OSHA to alert industrial hygienists, employers, and workers that potential significant contribution to the overall exposure to certain chemicals can occur via the cutaneous route.

Thus, skin designations encourage employers to consider whether changes should be made to processes involving such chemical substances in order to reduce the potential for systemic toxicity from dermal absorption.

On January 10, 2006 the EPA announced the receipt of test data regarding *In Vitro* Dermal Absorption Rate for 13 of the chemicals of interest to OSHA. The 13 chemicals for which the EPA has received the dermal absorption data are:

- Biphenyl (Chemical Abstract Service No. 95-52-4),
- Tert-butylcatechol (CAS No. 98-29-3),
- Carbon disulfide (CAS No. 75-15-0),
- Catechol (CAS No. 120-80-9),
- Chlorobenzene (CAS No. 108-90-7),
- Cyclohexanol (CAS No. 108-93-0),
- P-dichlorobenzene (CAS No. 106-46-7),
- Dimethylacetamide (CAS No. 127-19-5),
- Ethylene dichloride (CAS No. 107-06-2),
- Hydroquinone monomethyl ether (CAS No. 150-76-5),
- Methyl formate (CAS No. 107-31-3),
- Vinyl toluene (CAS No. 25013-15-4), and

- P-xylene (CAS No. 106-42-3).

The information provided to the EPA is available through an official public docket under docket identification (ID) number: EPA-HQ-OPPT-2003-0006. This docket can be accessed at <http://www.regulations.gov>

Ref: 1. Federal Register (69 Federal Register 22402). 2. Federal Register (71 Federal Register 1538)

Chemical Safety and Pollution Data for 122 Chemicals for International Shipment

By Abdul H. Khalid,
Chemical Engineer, HTIS

On November 23, 2005, the U.S. Coast Guard issued a notice in the Federal Register alerting owners of bulk chemical tanker ships and chemical manufacturers that the chemical safety and pollution data for 122 chemicals was missing and should have been submitted on or before December 31, 2005 to the International Maritime Organization (IMO).

In 2004, the IMO's Maritime Safety Committee adopted the revised International Code for the construction and equipment of ships carrying dangerous

chemicals in bulk (IBC code) and included a list of 122 chemicals that may be transported in bulk internationally. According to this notification over 120 products were omitted from either Chapter 17 or 18 of the IBC code due to missing safety and or pollution data (flammability point and toxicity). The U.S. Coast Guard expects that chemical manufacturers and transporters could face problems with international shipments when the revised standards for transporting bulk chemicals take effect after January 1, 2007. IMO works for the United Nations and is responsible for the safety and security of international shipment of chemicals and marine pollutants from ships.

The Coast Guard lists the 122 chemicals that do not have complete safety and pollution data in alphabetical order online at: <http://a257.g.akamaitech.net/7/257/2422/01jan20051800/e.docket.access.gpo.gov/2005/05-23234.htm>.

Chemical manufacturers and transporters can submit the missing data on the listed 122 chemicals to GESAMP/EHS, IMO, 4 Albert Embankment, London, SE1 7SR, United Kingdom (U.K). The full text of this notice is available at: <http://a257.g.akamaitech.net/7/257/2422/01jan20051800/e>

docket.access.gpo.gov/2005/05-23234.htm.

According to Mr. Tom Felleisen of the U.S. Coast Guard, Hazardous Materials Standards Division, the 2004 revision to the international shipping standards did not affect the shipment of chemicals and substances between U. S. ports. The Coast Guard intends to incorporate the international standards into the U.S. regulations in the near future.

Comments on the program should be submitted, with the Coast Guard docket number USCG-2005-23024, to: Docket Management Facility, DOT, 400 Seventh Street S.W., Washington, D.C. 20590-0001; by fax at (202) 493-2251 or the dot web site at <http://dms.dot.gov>. For further information on these chemicals, contact the Mr. Tom Felleisen, U.S. Coast Guard, Hazardous Materials Standards Division, phone: 202-267-0086.

Reference: Federal Register, November 23, 2005, Vol. 70, No. 225, pages 70861-70862.

GAO Reports on Federal Role in E-waste Recycling and Reuse

By Tom McCarley, Chemist, Chemist, HTIS

In July testimony before the Senate Subcommittee on Superfund and Waste Management, John Stephenson with the General Accounting Office (GAO) presented a rundown on the role of the federal government in encouraging the recycling and reuse of the tons of electronic waste generated every year in the US. Estimates are that some 100 million computers, monitors, and televisions become obsolete every year. With the advent of high definition broadcasting, the number of old TV sets being scrapped will not likely be going down. E-waste is already a major problem and much of the scrap electronics is classified as hazardous waste based on the levels of lead and possibly other toxic materials in them.

The 22 page testimony report, GAO-05-937T, "Electronic Waste – Observations on the Role of the Federal Government in Encouraging Recycling and Reuse" is dated July 26, 2005 and is available for download from <http://www.gao.gov/new.items/d05937t.pdf>. The report outlines the fact that both economic and regulatory factors act as disincentives to the recycling and reuse of used electronics. The report goes on to state that opportunities exist for the federal government to do more to encourage e-waste recycling and highlights two

EPA programs that are a start:

The Federal Electronics Challenge (FEC)

The Electronic Product Environmental Assessment Tool (EPEAT)

Both of these programs are discussed in more detail in the report and at <http://www.federalelectronicchallenge.net/> and <http://www.epeat.net/>

Reference: General Accounting Office Report – GAO-05-937T "Electronic Waste – Observations on the Role of the Federal Government in Encouraging Recycling and Reuse", July 26, 2005.

NEMA's State-by-State Comparison of Hazardous Lamp Regulations

By Tom McCarley, Chemist, HTIS

Many HTIS queries and a number of HTIS Bulletin articles have dealt with the subject of spent fluorescent and other types of lamps being classified as hazardous waste. With the advent of low-mercury lamps, there are still concerns and differences among State environmental agencies over what is allowed in terms of handling, treatment, and disposal of spent lamps.

The National Electrical Manufacturers Association (NEMA) has assembled a very handy State-by-State comparison of State lamp regulations at http://www.nema.org/lampcycle/support_files/stringency2.html . The matrix is known as a State-by State Stringency Comparison Table.

The handy matrix of Federal, State, and Territory Lamp regulations has five columns of information:

- Jurisdiction
- Generator Exemption (Conditionally Exempt Small Quantity Generator - CESQG)
- Where waste from CESQG can go?
- Can the waste be declared non-hazardous based on hazardous waste characteristic [TCLP]?
- Other stringency or exemptions?

Environmental managers at major commands or headquarters levels will find the assembled data in the matrix especially helpful as they attempt to understand the myriad of differing State

regulations on the spent lamp issue.

Reference: National Electrical Manufacturers Association (NEMA) - State-by State Stringency Comparison Table - http://www.nema.org/lampcycle/support_files/stringency2.html .

Protecting Workers at Risk to Histoplasmosis

By Abdul H. Khalid,
Chemical Engineer, HTIS

Hazardous Technical Information Services (HTIS) has received several calls concerning the health effects and possible protective measures dealing with histoplasmosis. HTIS researched the issue and discovered that the National Institute for Occupational Safety and Health (NIOSH) had published an update on histoplasmosis. In February 2005, NIOSH published a revision of its publication # 2005-109 "Histoplasmosis: Protecting Workers at Risk" which was originally published in September 1997.

"Histoplasmosis is an infectious disease caused by inhaling the spores of a fungus called *Histoplasma capsulatum*. Histoplasmosis is not contagious; it cannot be transmitted from an

infected person or animal to someone else.

H. capsulatum is a dimorphic fungus, which means it has two forms. It is a mold (mycelial phase) in soil at ambient temperatures, and after being inhaled by humans or animals, it produces a yeast phase when spores undergo genetic, biochemical, and physical alterations. Spores of *H. capsulatum* are oval and have two sizes.

Macroconidia (large spores) have diameters ranging from 8 to 15 micrometers (μm), and microconidia (small spores) range from 2 to 5 μm in diameter. Yeast cells of *H. capsulatum* have oval to round shapes and diameters ranging from 1 to 5 μm .

Histoplasmosis primarily affects a person's lungs, and its symptoms vary greatly. The vast majority of infected people are asymptomatic (have no apparent ill effects), or they experience symptoms so mild they do not seek medical attention and may not even realize that their illness was histoplasmosis. If symptoms do occur, they will usually start within 3 to 17 days after exposure, with an average of 10 days.

Histoplasmosis can appear as a mild, flu-like respiratory illness and has a combination of symptoms, including malaise (a general ill feeling), fever, chest pain, dry or nonproductive cough, headache, loss of appetite,

shortness of breath, joint and muscle pains, chills, and hoarseness.

Histoplasmosis can be diagnosed by identifying *H. capsulatum* in clinical samples of a symptomatic person's tissues or secretions, testing the patient's blood serum for antibodies to the microorganism, and testing urine, serum, or other body fluids for *H. capsulatum* antigen. On occasion, diagnosis may require a transbronchial biopsy."

A chest X-ray of a person with acute pulmonary histoplasmosis will commonly show a patchy pneumonitis, which eventually calcifies.

Chronic lung disease due to histoplasmosis resembles tuberculosis and can worsen over months or years. Special antifungal medications are needed to arrest the disease. The most severe and rarest form of this disease is disseminated histoplasmosis, which involves spreading of the fungus to other organs outside the lungs. Disseminated histoplasmosis is fatal if untreated, but death can also occur in some patients even when medical treatment is received. People with weakened immune systems are at the greatest risk for developing severe and disseminated histoplasmosis. Included in

this high-risk group are persons with acquired immunodeficiency syndrome (AIDS) or cancer and persons receiving cancer chemotherapy; high-dose, long-term steroid therapy; or other immuno-suppressive drugs.

A person who has had histoplasmosis can experience reinfection after reexposure to *H. capsulatum*. Persons with immunity to *H. capsulatum* who become reinfected will usually experience a heightened inflammatory response, but they will have a less severe illness of shorter duration than what resulted from the primary infection.

H. capsulatum grows in soils throughout the world. In the United States, the fungus is endemic and the proportion of people infected by *H. capsulatum* is higher in central and eastern states, especially along the Ohio and Mississippi River valleys. The fungus seems to grow best in soils having a high nitrogen content, especially those enriched with bird manure or bat droppings. The organism can be carried on the wings, feet, and beaks of birds and infect soil under roosting sites or manure accumulations inside or outside buildings. Active and inactive roosts of blackbirds (e.g., starlings, grackles, red-winged blackbirds, and cowbirds) have been found heavily

contaminated by *H. capsulatum*. Therefore, the soil in a stand of trees where blackbirds have roosted for 3 or more years should be suspected of being contaminated by the fungus. Habitats of pigeons and bats, and poultry houses with dirt floors have also been found contaminated by *H. capsulatum*.

On the other hand, fresh bird droppings on surfaces such as sidewalks and windowsills have not been shown to present a health risk for histoplasmosis because birds themselves do not appear to be infected by *H. capsulatum*. Rather, bird manure is primarily a nutrient source for the growth of *H. capsulatum* already present in soil. Unlike birds, bats can become infected with *H. capsulatum* and consequently can excrete the organism in their droppings.

Increasing numbers of resident Canada geese in urban and suburban areas have caused concern about whether droppings and water contaminated by their droppings are possible sources of disease transmission to humans. As with exposures to the fresh droppings of other birds, exposures to goose droppings have not been shown to be a health risk for histoplasmosis.

Individuals who are involved in work dealing with soils particularly soil enriched with bird and bat droppings, are at high risk of acquiring infection from *H.*

capsulatum. Groups of workers who are more susceptible to infection from the *H. capsulatum* fungus are:

- Farmers and poultry keepers who clean silos, chicken coops, pigeon roosts and bat-infested lofts,
- Gardeners and horticulturists who some time use poultry manure as fertilizer,
- Construction and other workers who are involved in earth-moving operations,
- Workers in road construction who are involved in tree-clearing or landscaping,
- Workers clearing or dismantling contaminated buildings,
- Workers who monitor bird populations, and
- Workers who have contact with bats or bat caves.

The following measures should be taken to reduce the risk of histoplasmosis:

- Excluding a colony of bats or a flock of birds from a building,
- Posting health risk warnings,
- Communicating health risks to workers,
- Controlling aerosolized dust when removing bat or bird manure from a building,
- Disinfecting contaminated material,
- Disposing of waste,
- Controlling aerosolized dust during construction, excavation, and demolition, and
- Wearing personal protective equipment.

The NIOSH booklet contains updated information that may help workers who are exposed to the disease-causing fungus. It is a guide for safety and health professionals, environmental consultants, supervisors, and others responsible for the safety and health of those working near material contaminated with *H. capsulatum*. Fact sheets about histoplasmosis are

available in English and Spanish languages from the NIOSH website at:
<http://www.cdc.gov/niosh/docs/2005-109>.

Reference: 1. NIOSH eNews, Vol. No. 2, N0.10, February 2005, web page at:
<http://www.cdc.gov/niosh/enews/>. 2. USAEHA (now USACHPPM) TG No. 142, December 1992 "Managing Health Hazards Associated with Bird and Bat Excrement", at:
<http://chppm-www.apgea.army.mil/ento/TG142.HTM> 3. "Recommendations for Protecting Workers From Histoplasma Capsulatum Exposure During Bat Guano Removal From a Church's Attic", Case Study by Steven W. Lenhart, Published in Applied Occupational and Environmental Hygiene, 9(4):230-236 (1994), Publication date: 01/01/1994.

OSHA Offers New HAZWOPER Guidance Document

By Beverly Howell,
Industrial Hygienist, HTIS

"A new safety and health guidance document posted on the Web on December 14, 2005, by the Occupational Safety and Health Administration (OSHA) will assist workers and employers

in determining whether an activity is, or would be considered, an "emergency response" activity under OSHA's Hazardous Waste Operations and Emergency Response (HAZWOPER) standard." The HAZWOPER standard is codified in 29 CFR (Code of Federal Regulations) 1910.120 and 1926.65.

HAZWOPER applies to employers and workers who may be exposed or potentially exposed to hazardous substances and who are working in specific operations, including emergency response operations for releases, or substantial threats of release, of hazardous substances.

"We received inquiries from workers involved in hurricane cleanup and recovery operations along the U.S. Gulf Coast asking whether their activities met the requirements of HAZWOPER," explained Acting Assistant Secretary of Labor for OSHA Jonathan L. Snare. "This guidance document was developed to not only help answer those specific questions, but to also provide another resource that will benefit all workers and employers who may be exposed to hazardous substances."

The OSHA guide provides an overview of the conditions in which a response or cleanup activity

may fall under the requirements of HAZWOPER. It is divided into two sections: *The Application of HAZWOPER to Worksite Response and Cleanup Activities* and *Employee Training for Worksite Response and Cleanup Activities*. Each section links to useful information and practical guidance to help with the appropriate response.

Flowcharts are included in the document for easy reference and to help outline what compliance pathway workers should follow depending on the nature of the worksite situation. Each one follows a question and answer format to draw a conclusion on what other OSHA standards will be enforced.

The document is located at: http://www.osha.gov/SLTC/hazardouswaste/application/worksite_response.html

Reference: OSHA News Release, "OSHA Offers New HAZWOPER Guidance Document", 12/14/2005.

OSHA Standards Housekeeping Old References Deleted

By Tom McCarley, Chemist, HTIS

From time-to-time, all regulatory agencies need to

do housekeeping on their regulations in the Code of Federal Regulations (CFR). This is especially true with an agency like the Occupational Safety and Health Administration (OSHA) with its many references to consensus standards over which it does not have control. As those standards from the alphabet soup of bodies like ASTM, ANSI, AWS, API etc. evolve and change, so does any regulation which refers to them.

OSHA workplace health and safety regulations are called OSHA standards.

By final rule in the Federal Register of September 13, 2005 and effective November 14, 2005, OSHA deleted from OSHA standards three references to national consensus standards and two references to industry standards that were outdated. The five standards being changed referred to industry standards that range in age from 35-60+ years old and are no longer available from the originating consensus standards organization.

The standards and their references being deleted in Title 29 of the Code of Federal Regulations are as follows:

- 29 CFR 1910.106(b)(1)(iii)(a)(2): OSHA revoked from its

standard for flammable and combustible liquids American Petroleum Institute Standard No. 12A, Specification for Oil Storage Tanks with Riveted Shells, Seventh Edition, September 1951 (API 12A).

- 29 CFR 1910.142(c)(4): OSHA revoked from its temporary labor camps standard a requirement that drinking fountains be constructed in accordance with the American National Standard Institute Standard Specifications for Drinking Fountains, ANSI Z4.2-1942. ANSI Z4.2-1942 contains ten specific recommendations concerning the construction of drinking fountains which are based on the technology and construction practices that existed in 1942.
- 29 CFR 1910.243(e)(1)(i): OSHA revoked from its portable powered tools standard a provision that certain power lawnmowers designed for sale to the general public meet the American National Standard Safety Specifications for Power Lawnmowers, ANSI B71.1-X1968 (ANSI B71.1-1968). OSHA replaced this provision

with a reference to the general machine guarding requirements contained in 29 CFR 1910.212. OSHA also removed the final two sentences of paragraph 1910.243(e)(1) that describe the types of mowers for which the specifications in ANSI B71.1-1968 do not apply. OSHA made these changes to simplify and clarify the scope and coverage of 29 CFR 1910.243.

- 29 CFR 1910.254(d)(1): OSHA revoked from its arc welding and cutting standard a recommendation that employers be acquainted with the American Welding Society's Recommended Safe Practices for Gas-Shielded Arc Welding, A6.1-1966.
- 29 CFR 1910.265(c)(31)(i): OSHA revoked a provision from its standard on Sawmills which suggests that employers use "appropriate traffic control devices," as set forth in American National Standard D8.1-1967 for Railroad Highway Grade Crossing Protection (ANSI D8.1-1967). ANSI withdrew the standard in 1981 and did not replace it.

Reference: Federal Register, Vol. 70, No. 176, pp 53925-53929, September 13, 2005.

Off-The-Job Injuries Exceeding Workplace Injuries

By Beverly Howell,
Industrial Hygienist, HTIS

Companies continue to work to manage, track and reduce workplace injuries and deaths and yet, employees are safer at their jobs than when they leave work. In fact, nine out of 10 deaths and two-thirds of disabling injuries suffered by workers in 2004 occurred off the job. According to the National Safety Council (NSC), recent gains in lowering workplace death rates – down 17 percent since 1992 – have been undone by the rate of fatalities occurring off the job, up 14 percent over that same period.

"The business costs of off-the-job accidents is staggering when you take into account lost wages and productivity, medical and disability payments, and training for new employees," said Alan C. McMillan, president and CEO of the National Safety Council.

According to 2004 National Safety Council statistics presented at the nation's first Off the Job Safety Symposium in Orlando in February, 2006 twice as

many workers – or 6.8 million – were seriously injured while off the job than were injured while working. Additional statistics from the NSC shows that of the 49,000 injury-related deaths in 2004 involving workers, roughly 90 percent occurred while employees were off the job.

In 2004, the cost of employee injuries – both on and off the job – was more than \$330 billion. Nearly 60% -- or \$200 billion – was for injuries to employees who were off the job.

According to the Agency for Healthcare Research and Quality, more is spent by private health insurance on medical care associated with trauma and poisoning for people of working age than for any other health condition including cancer, heart conditions, mental disorders or upper respiratory conditions and asthma.

In addition, off-the-job injuries accounted for employers losing 165 million days of production time, compared with 80 million lost work days as a result of workplace injuries.

Increasingly, businesses are recognizing the value of keeping their employees safe at all times both on and off the job. In a recent National Safety Council survey of 1,300 companies of varying sizes, the impact of off-the-

job safety training has begun to be felt at businesses that have implemented programs. Of the companies that have implemented off-the-job programs, 58 percent reported reductions in injuries occurring outside of work.

Research presented at the 17th World Congress on Safety and Health at Work during the fall of 2005 found that for every dollar businesses spend on safety, they realize a \$3 to \$6 savings.

Gary Kopps, manager of Occupational Safety Worldwide for John Deere and Co., noted that corporate-sponsored safety initiatives are a win-win for both businesses and their employees.

“Employees value that you take time to remind them about safety, and they pay you back many times over through loyalty, increased productivity and quality, and reduced absenteeism,” said Kopps.

The National Safety Council’s Second Edition of its “Off-The-Job Safety Program Manual” takes you through: investing in off-the-job safety, collecting data and measuring off-the-job safety costs. It outlines the elements of a successful program, discusses motivating employees and creating the right workplace culture, and offers tips and

tactics for communicating your off-the-job safety program. The last chapter summarizes off-the-job safety topics that can be applied within your off-the-job safety program.

Reference: News Release, National Safety Council, February 6, 2006.

CDC’s New Coordinating Center for Environmental Health and Injury Prevention

By Abdul H. Khalid,
Chemical Engineer, HTIS

On August 10, 2005, the Department of Health and Human Services’s (DHHS) Centers for Disease Control and Prevention (CDC) established a new division called Coordinating Center for Environmental Health and Injury Prevention (CCEHIP). The CCEHIP plans, directs, and coordinates national and global public health research, programs, and laboratory sciences that improve health and eliminate illness, disability, and/or death caused by injuries or environmental exposures.

According to the CDC, the new center is designed to coordinate and promote research efforts between the three existing divisions, the National Center for

Environmental Health (NCEH), the Agency for Toxic Substances and Disease Registry (ATSDR) and the National Center for Injury Prevention and Control (NCIPC).

The NCEH works on many issues, including measuring the levels of chemicals in residents and designing buildings and urban spaces that promote healthful living. The ATSDR assesses the human health risks posed by superfund and other hazardous waste sites.

The new coordinating center will seek to make sure that expertise is available to whatever division needs it.

This coordinating center was created in 2004, but could not be formally announced until it was approved by the Congress last spring. The full text of this document is available at GPO web site at: http://a257.g.akamaitech.net/7/257/2422/01jan20051800/e_docket.access.gpo.gov/2005/05-15797.htm

Reference: Federal Register, August 10, 2005, Vol. 70, No.153, page 46526.

On the Web

NIOSH Publishes Major Report on Occupational Lung Disease:

Pulmonary afflictions from working in dusty or vapor-filled environments have plagued mankind for millennia. From the earliest miners to

modern-day nanotechnology workers, the inhalation and absorption of small particles and vapors is an ongoing medical and occupational concern that threads itself through history. In September 2005, the National Institute for Occupational Safety and Health (NIOSH) issued its sixth in a series of occupational respiratory disease surveillance reports, known as the Work-Related Lung Disease (WoRLD) Surveillance Report. It is available online at:

<http://www2a.cdc.gov/drds/worldreportdata> (tmc)

ATSDR's Draft Toxicological Profiles for Chemicals:

The Agency for Toxic Substances and Disease Registry (ATSDR) draft toxicological profiles for eight chemicals commonly found at superfund sites are now available online.

ATSDR has updated profiles for perchlorates, acrolein, arsenic, barium, benzene, heptachlor, heptachlor epoxide, lead, and xylenes. The draft profiles are available at:

<https://www.atsdr.cdc.gov/toxpro2.htm> (ahk)

U.S. and Canada Joint Labeling Guidelines for Pesticides:

The U.S. Environmental Protection Agency (EPA) announced voluntary labeling guidelines to assist manufacturers and

formulators in their efforts to reduce insect resistance to specific pesticides in agriculture. These voluntary guidelines are a part of a larger effort under the North American Free Trade Agreement (NAFTA) designed to coordinate pesticide regulatory work between the United States and Canada. The document titled "Guidance for Pesticide Registrants on Pesticide Resistance Management Labeling (PR Notice 2001-5)" is available online at:

http://www.epa.gov/PR_Notices/pr2001-5.pdf (ahk)

Free Publications Available From PHMSA, Office of HAZMAT Safety:

The U.S. Department of Transportation, Pipeline and Hazardous Materials Safety Administration (PHMSA) has developed a **Hazmat Training Materials and Publications On-Line Service** under the auspices of the Office of Hazardous Materials Safety. This office provides **free and for sale** publications and videos to assist in training and HMR compliance. The publications can be accessed on the below website:

https://hazmatonline.volpe.dot.gov/services/pub_default.aspx (tme)

2005 Hazardous Materials Incident

Data: The U.S. Department of Transportation has released its summary data of incidents involving hazardous materials for calendar year 2005. The information is contained in a series of self-extracting executable or zip files at

<http://hazmat.dot.gov/pubs/in/c/data/2005/2005frm.htm> for Windows format and as the corresponding zip files for the Macintosh format. The actual data is in a data base format (dbf) that can be opened in Microsoft Excel or other compatible program for a quick summary look. A separate user guide

provides further information on opening and reading reports, some of which date back to 1993. (tmc)

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Changes to Chemical Agent Resistant Paint Specifications & NSNs

By Terry Oliver, Chemist, GSA

MIL-C-46168, Military Specification, "Coating, Aliphatic Polyurethane, Chemical Agent Resistant", was cancelled on Aug 17, 2005 by the Army Research Laboratory (ARL), Aberdeen Proving Ground, MD. This specification covers both camouflage and non-camouflage, chemical agent resistant, aliphatic polyurethane coating for use as a finish coat on military combat equipment. The reason for canceling MIL-C-46168 is because technology has introduced newer products that offer improved durability and lower volatile organic compound (VOC) exposures. This specification was canceled due to improved technology and in anticipation of a more restrictive regulatory environment for VOCs. There are a total of 90 paint NSNs, available in 19 colors that will be cancelled as a result of this change. The paints are offered in 1.25 QT, 1.25 GL, or 5 GL two component kits.

GSA will continue to issue inventory on the below five stock NSN's until exhausted.

8010-01-131-6255	Green	(1.25 GL KIT)
8010-01-146-2646	Black	(1.25 GL KIT)
8010-01-160-6742	Green	(5 GL KIT)
8010-01-162-5578	Green	(1.25 GL KIT)
8010-01-260-0908	Tan	(5 GL KIT)

Upon depletion of the current inventory and cancellation of all associated NSN's customers will be offered two other specifications. The two replacement specifications are: MIL-DTL-53039, Detail Specification, "Coating, Aliphatic Polyurethane, Single Component, Chemical Agent Resistant" and MIL-DTL-64159, Detail Specification, "Water Dispersable, Aliphatic Polyurethane, Chemical Agent Resistant". Users should refer to these specifications to determine which one meets their requirements.

For a listing of MIL-C-46168 NSNs and possible replacements under MIL-DTL-64159 or MIL-DTL-53039, go to:

<http://www.gsa.gov>

[Select "products"]

[Select "environment"]

[Select "Safer Paints, Cleaning and Chemical Prod"]

[Look under "Related GSA Topics" for link to cross reference matrix]



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The HTIS Bulletin is produced bimonthly.

Correspondence should be addressed to Defense Supply Center Richmond,
DSCR-VBC, 8000 Jefferson Davis Highway, Richmond, VA 23297.5609 or call DSN 695.5168,
Commercial 804.279.5168, or Toll Free 800.848.HTIS. Our Fax is 804.279.4194. We can also be reached
by e-mail at

htis@dscr.dla.mil or on the Internet at <http://www.dscr.dla.mil/htis/htis.htm>.

Commander, Defense Supply Center Richmond
RADM Mark F. Heinrich, USN

Director, Aviation Engineering
B. Montague Ingram

Chief, Hazardous Information Programs Division
A. J. Kendrick

Chief, Hazardous Technical Information Services Branch
Fred J. Tramontin, Ph.D.

HTIS Bulletin Technical Advisor
Fred J. Tramontin, Ph.D.

Editor, HTIS Bulletin
Leonard S. Lambert

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